Michigan Allergy & Asthma Society

Administrative Office
120 W. Saginaw St.
East Lansing, MI 48823
(517) 324-2505

On January 4, 2012, Amaria Johnson, a 7-year old peanut allergic girl from Richmond, VA, bit into a piece of candy that a classmate gave her.[1] Shortly thereafter she went into anaphylactic shock, and died. She was not given epinephrine until after paramedics arrived. She did not have her own unit available because her mother could not afford to keep an extra epinephrine unit at her school. At the time Virginia had no law that allowed schools to maintain an unassigned epinephrine unit, nor was there a law that enabled the school staff to use another student's unit – even though several were available – to save Amaria's life. This is a sad case, but one that we can learn from so that something like this never happens again. I am here to testify in support of Michigan of HB 4352 and HB 4353 today.

Under the proposed bills schools would be required to stock unassigned epinephrine, and people who administer this medication will be exempt from liability if they administer unassigned epinephrine. These bills would comply with H.R. 2094, which was passed by US House of Representatives in July and introduced in the Senate last week, which encourages states to adopt laws requiring stock epinephrine and provides incentive to states who pass such measures.[2] Currently, 27 other states have laws that either require or permit school districts to stock unassigned epinephrine, and 4 states have bills under proposal.[3] (Figure 1)

Epinephrine is unequivocally the drug-of-choice for treatment for a severe allergic reaction, and can rapidly reverse life-threatening complications of a reaction if it is promptly administered.[4] Portable, auto-injecting devices are sold at a retail cost of approximately $280 for a device 2-pack.[5] There are well-established data showing a clear association between failure to use epinephrine and death from food allergy.[6-8] There are bountiful data which demonstrate epinephrine is not readily used when it should be, or worse, that it is not available when it is needed.[9] Epinephrine devices are easy to use—the latest model even provides auditory instruction—and there are ample, free internet based training programs available. I routinely train parents how and when to use these devices every day in about a 5 minutes per session.

There are emerging, concerning data which suggests that food allergy may affect as many as 8% of children, 15 million Americans, and approximately 1 in 13 children – this is about 2 children per standard-sized elementary school classroom.[10,11] As a result, nearly every Michigan school has the burden of not only protecting vulnerable children from having a reaction, but knowing how to treat one should it occur on school grounds or in the course of a school activity. School administrators may also be forced to treat non-food allergies such as a stinging insect allergy (which affects approximately 3% of the population) which could be potentially fatal to a child as well.[4]

Data indicating how often school personnel in Michigan administer epinephrine are unknown because this statistic is not currently tracked. Recent studies conducted in other states, however, teaches us that schools do frequently administer epinephrine to students during school hours.[12,13] These studies also

indicate that many times the child in question is experiencing an allergic reaction for the first time. As a result, because, there is a distinct risk that a child experiences his or her first allergic reaction while at school; in these cases it is not possible for that child to maintain a personal device at school. Recent data from a 2001-2003 study of Massachusetts schools noted that there were 115 cases of epinephrine use across a sample containing 48 school districts over a two year period. 24% of these administrations in the study were to individuals who did not know that they had an allergy.[14] Similar data from Chicago Public Schools – conducted in a state which allows undesignated epinephrine to be maintained – noted that of the 38 people who were treated with undesignated epinephrine in the 2012-13 school year, 21 were unaware that they had an allergy.[15] If a child in Michigan experienced an allergic reaction at school for the first time, and thus did not have his or her own device at the school; without the passage of the proposed bills, epinephrine would not be provided until an ambulance arrived – which in some cases may be too late. That is why passing these bills so important.

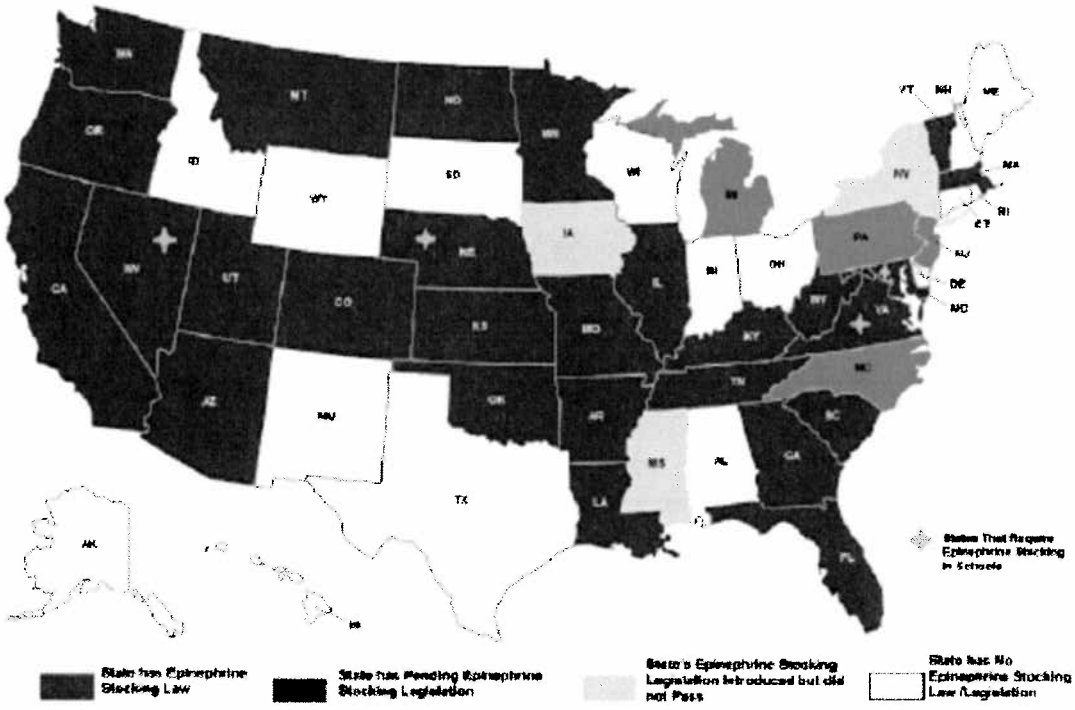
Comparison could be made with fire extinguishers, which are required in schools. According to FEMA, on average 118 fires a year occurred in schools per state between 2003 and 2011.[16] Class ABC fire extinguishers used in schools cost from $70(6L)-$395(20L) depending on size, Halon extinguishers for electronic fires (recommended by OSHA for computer fires) cost between $135-$540 depending on the size, and class K extinguishers for grease fires (required if the school has a cafeteria with a kitchen) cost between $150-$200.[17,18] Schools maintain several fire extinguisher units on the grounds.[19,20] The total cost to maintain multiple fire extinguisher units is much more expensive than the $280 to keep the single epinephrine device 2 pack specified in the bill.

If this state requires schools to maintain fire extinguishers and encourages them to maintain fire extinguishers, then it follows that epinephrine devices should be required as well. Data support that epinephrine is used more frequently in schools than a fire extinguisher (39 times in 2012-2013 in a single Chicago school district alone), and the cost of maintaining epinephrine is significantly less expensive as well. There are several other examples of investment of time and money into emergency preparedness for events that have a low likelihood of happening at school. Yet, we are missing the obvious—that allergic reactions happen with higher frequency, and we have no statewide legislation to protect our vulnerable children.

As a professional pediatric allergist, who specializes in food allergy and anaphylaxis, I strongly urge you to pass these bills. These measures are about as "win-win" of a situation as I believe can be encountered. These bills are by far in the best interest of the children of our state, and the cost to provide these units to every school is low. In fact, Mylan Pharmaceuticals has sponsored a program that would allow schools in financial need to receive these devices free of cost. The child in Richmond, VA would likely be alive today, thinking ahead to her 9th birthday, if either such a law had existed in her state at that time. Let's learn from her tragic story. Passing these bills will give our educators the tools they need to prevent another unnecessary death.

Matthew Greenhawt, MD, MBA, MSc, FAAP
Research Director, University of Michigan Food Allergy Center
Assistant Professor, Department of Internal Medicine
Division of Allergy and Clinical Immunology
University of Michigan Medical School
University of Michigan Health System

Figure 1: Current Epinephrine Law Status by US State



Source: The Asthma and Allergy Foundation of America (AAFA), www.StateHonorRoll.org, accessed on September 9,

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